

Application No.: 10/683530
Docket No.: EL0517USNA

Page 2

Amendments to Claims

1. (Currently Amended) A screen printable hydrogel composition comprising:
 - (a) A soluble or partially soluble polymer wherein said polymer is a copolymer, interpolymers or mixture thereof wherein said polymer is a photocrosslinkable polymer which is a copolymer, interpolymers or mixture thereof, wherein each copolymer or interpolymers comprises (1) a nonacidic comonomer comprising a C₁₋₁₀ alkyl acrylate, C₁₋₁₀ alkyl methacrylate, styrenes or combinations thereof; (2) an acidic comonomer and its salts comprising ethylenically unsaturated carboxylic acid containing moiety, wherein 2-25% of the carboxylic acid containing moiety is reacted with a reactive molecule having a first and second functional unit, wherein the first functional unit is a vinyl group and the second functional unit is capable of forming a chemical bond by reaction with the carboxylic acid moiety; (3) third comonomer units formed from the reacted portion of acidic comonomers; and (4) a nonacidic comonomer comprising C₁₋₁₀ alkyl or alkoxy methacrylate or acrylate;
 - (b) initiation system;
 - (c) thickener;
 - (d) water; and
 - (e) solvent;with the proviso that the composition has a viscosity of greater than about 10 Pa-s and wherein said composition is a screen printable hydrogel composition.
2. (Cancelled) ~~The composition of Claim 1 wherein said polymer is a photocrosslinkable polymer which is a copolymer, interpolymers or mixture thereof, wherein each copolymer or interpolymers comprises (1) a nonacidic comonomer comprising a C₁₋₁₀ alkyl acrylate, C₁₋₁₀ alkyl methacrylate, styrenes, substituted styrenes or combinations thereof; (2) an acidic comonomer and its salts comprising ethylenically unsaturated carboxylic acid containing moiety, wherein 2-25% of the carboxylic acid containing moiety is reacted with a reactive molecule having a first and second functional unit, wherein the first functional unit is a vinyl group and the second functional unit is capable of forming a chemical bond by reaction with the carboxylic acid moiety; (3) third comonomer units formed from the reacted portion of acidic comonomers; and (4) a nonacidic comonomer comprising C₁₋₁₀ alkyl or alkoxy methacrylate or acrylate.~~
3. (Currently Amended) The composition of Claim 21 wherein the vinyl group is selected from the group consisting of a methacrylate, acrylate group and ~~or mixtures thereof.~~

BEST AVAILABLE COPY

Application No.: 10/683530
Docket No.: EL0517USNA

Page 3

4. (Currently Amended) The composition of Claim 21 wherein the second functional unit is selected from the group consisting of an epoxide, alcohol, amine and or mixtures thereof.
5. (Currently Amended) The composition of ~~any one of~~ Claims 1-4 further comprising a monomer.
6. (Currently Amended) The composition of Claim 5 wherein said monomer is selected from the group consisting of ~~comprising~~ polyoxyethylated trimethylolpropane triacrylate, ethylated pentaerythritol triacrylate, dipentaerythritol monohydroxypentaacrylate, 1,10-decanediol dimethacrylate and mixtures thereof.
7. (Currently Amended) The composition of ~~any~~ Claim 51 in which the solvent is selected from the group consisting of ~~comprising~~ carbitol acetate, ethanol, methyl ethyl ketone, acetone, and mixtures thereof.
8. (Currently Amended) The composition of Claim 51 wherein the thickener is selected from the group consisting of ~~comprising~~ polyvinyl pyrrolidone, fumed silica, polyethylene oxide, carboxymethyl cellulose, polyvinyl pyrrolidone/vinyl acetate copolymer, and mixtures thereof.
9. (Currently Amended) The composition of Claim 51 further comprising an additive selected from the group consisting of ~~comprising~~ humectants, surfactants, biocides, preservatives and combinations thereof.
10. (Currently Amended) The composition of Claim 51 further comprising an ionic component.
11. (Currently Amended) The composition of Claim 51 which is in the form of a paste suitable for screen printing.
12. (Withdrawn) A method of producing a processed hydrogel film comprising:
 - (a) providing a screen printable hydrogel composition;
 - (b) providing a substrate;
 - (c) depositing the composition in (a) onto said substrate via screen printing techniques; and
 - (d) processing said composition on said substrate to form a hydrogel film.

BEST AVAILABLE COPY

Application No.: 10/683530
Docket No.: EL0517USNA

Page 4

13. (Withdrawn) A method of producing a processed hydrogel film:
 - (a) providing the composition of any one of Claims 1-11;
 - (b) providing a substrate;
 - (c) depositing the composition in (a) onto said substrate via screen printing techniques; and
 - (d) processing said composition on said substrate to form a hydrogel film.
- 14 (Withdrawn) A hydrogel film formed by the method of Claim 13.
- 15 (Withdrawn) An electrode utilizing the composition of Claim 10.
- 16 (Withdrawn) An electrode utilizing a hydrogel film produced by the following steps:
 - a. providing the composition of Claim 5;
 - b. providing a substrate;
 - c. depositing the composition in (a) onto said substrate via screen printing techniques; and processing said composition on said substrate to form a hydrogel film.
- 17 (Withdrawn) An electrode utilizing the composition of Claim 11.

BEST AVAILABLE COPY